

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/032378

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G01N1/24 G01N15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, INSPEC, COMPENDEX, BIOSIS, IBM-TDB, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 941 899 A (LIU ET AL) 17 July 1990 (1990-07-17)	1-11, 22-33
Y	column 2, line 21 - column 3, line 51 figures 1-3 -----	12-21, 34-39
Y	HU 193 716 B (KARPATI, JUDIT, HU; LAKATOS, GUSZTAV, HU) 31 July 1989 (1989-07-31) figures 1-4 -----	12-21, 34-39
A	US 4 178 794 A (INDERBITZEN, EMIL R ET AL) 18 December 1979 (1979-12-18) the whole document ----- -/-	1-39

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

14 April 2005

Date of mailing of the international search report

27/04/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl
Fax: (+31-70) 340-3016

Authorized officer

Timonen, T

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2004/032378

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 103 534 A (STENGER ET AL) 15 August 2000 (2000-08-15) figures 1,5 column 6, line 53 - column 7, line 45 -----	1-39
A	US 6 517 593 B1 (ROBERTSON LARRY DON ET AL) 11 February 2003 (2003-02-11) the whole document -----	1-39

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/032378

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4941899	A	17-07-1990	AU	5387090 A		25-10-1990
HU 193716	B	28-05-1987	HU	41901 A2		28-05-1987
US 4178794	A	18-12-1979	NONE			
US 6103534	A	15-08-2000	NONE			
US 6517593	B1	11-02-2003	US	2003015098 A1		23-01-2003